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Giesbrecht, Tobias ; Schmidt-Rauch, Susanne ; Schwabe, Gerhard

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TOWARDS VALUE CO-CREATED CITIZEN ADVISORY: THE SMART ADVISOR'S SKILLS

*Giesbrecht, Tobias, University of Zurich, Binzmuehlestrasse 14, 8050 Zürich, CH,
giesbrecht@ifi.uzh.ch*

*Schmidt-Rauch, Susanne, University of Zurich, Binzmuehlestrasse 14, 8050 Zürich, CH,
schmidt@ifi.uzh.ch*

*Schwabe, Gerhard, University of Zurich, Binzmuehlestrasse 14, 8050 Zürich, CH,
schwabe@ifi.uzh.ch*

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To bridge this gap, we emphasise the interrelations between the advisors' basic competencies and their media literacy. We identify the prerequisite competencies which public administrators require to provide co-created citizen advisory service while integrating the available media into their advisory activities. We propose a didactical concept of training, divided into a qualification stage and a learning-on-the-job construct to empower advisors to perform IT-supported, value co-created citizen advisory services. We base our work empirically on a qualitative approach: We conducted ten mystery shopping episodes and interviewed nine advisors and 26 citizens in eight municipalities in Germany and one in Switzerland.

Keywords: Citizen Advisory, Public Administration, Value Co-Creation, Media Literacy

1. INTRODUCTION

Citizens' demand on service quality rise due to their increasing self-perception as customers of the public administration (Schedler & Proeller 2003). Within their e-Government-strategies, public administrations are thus trying to modernize their bricks and mortar citizen encounters by introducing IT. For the task of information brokering, these IT tools can be simple and their usage is easy to learn. However, when it is about complex information needs, e.g., "I'm new in town, what do I have to do?"¹, citizens demand more advisor-like behaviour from public administrators. Accordingly, the correspondent advisors' demands on IT-support increase. Public administrations have also realized this trend, as a study on citizen service quality conducted by Accenture in 2007 (22 countries, 9,000 citizens, 52 public servants), states: "*Governments realize that just implementing the technology will not guarantee leadership in customer service [...] they continue to overlook, or at least underestimate, the impact of the workforce.*"

Consequently, if simple adoption of IT-artefacts is not enough to enhance the quality of advisory services, the advisors' capabilities come to the fore. Different studies on advisors' (information) behaviour point out the poor adoption of IT during advisors' counselling and indicate the rationales within their individual capabilities (Mogicato et al. 2009, Hielscher & Ochs 2009, Bretscher 2009). These studies, however, provide no further insights which qualification is needed for advisors and how to develop them. There are a variety of models in current literature which conceptualize an individual's competencies. They describe the fundamental human skills (i.e., professional, methodical, social and personal skills) and explain the cognitive process in developing competencies (Erpenbeck & von Rosenstiel 2007, Anderson 2001). But a descriptive model, characterizing the scope of target competencies of advisors, including the consequences of new technology-enabled ways of working, is still missing.

Within the provision of comprehensive citizen advisory service, public administrations are confronted with the task of understanding the almost unlimited *problem space* of their customers, which contains a huge variety on needs occurring in their correspondent life situation. Since this circumstance (not only a specific information request) leads to contacting the public administration, the problem space might be diffuse and the language citizens use to describe it may differ from the administration's vocabulary. Mapping the problem space onto the *solution space* (in the mind of the administrator) therefore is demanding, and the conversational partners have no support other than their verbal dialogue. An empathic way to come up with a shared problem definition (which both administrator and citizen understand) is to use open questions to allow for a cooperative exploration of the problem space. First attempts in research pointing in this direction are reported, for instance, for travel and financial counselling (Schwabe & Novak 2009, Nussbaumer & Schwabe 2010).

The implications for public administrations' advisors providing this service are far-reaching. Due to the organizational structure of today's public administrations, specific expert knowledge is only available within the corresponding department. Accordingly, to provide comprehensive advice, these citizen advisors must have sufficient cross-departmental knowledge, as well as the distinct media literacy to access the diverse departments' information sources. Furthermore, to give sound advice to their customers, they need the fundamental capabilities of skilled advisors, e.g., being empathic and responsive to citizen's requests, building up a common understanding of the problems, and guiding the solution-finding process. Whereas current research approaches, which discuss public services in the context of e-Government, give insights into the higher goals of citizen services (e.g., Denhardt & Denhardt 2000), they provide little practical support how to establish the correspondent skills of the public employees.

In this paper, we want to fill this gap by developing a research framework to identify the prerequisite competencies a skilled advisor requires to provide comprehensive citizen advisory service by utilizing

¹ This "concept of circumstances", public administrations currently try to implement on their web appearances (cf. www.service-bw.de, www.direct.gov.uk), but according to the circumstance (and one has to know that he is in one) these e-services are very restricted.

the available IT sources (section 2). For that purpose, we describe the current state of public administrators' abilities regarding their advice-giving practices, and identify current shortcomings (section 3). Subsequent, based on the literature and an analysis of ongoing research projects, we derive the target capabilities advisors should have (section 4 and 5). Finally, we discuss our findings to obtain the competencies which skilled advisors in modern public administrations should have and propose a set of design principles for a learning-on-the-job concept supporting the development of these competencies. With the development of these learning principles, we aim to deepen our understanding of the design of advisory information systems for public administrations.

2. RESEARCH FRAMEWORK

The question of which capabilities public administrations' advisors compellingly need in order to give sound advice occurred within a larger project, in our research group, developing an IT-based support tool for cooperative citizen advisory in public administrations. The issue of the individual's capabilities to perform the given task, i.e., giving advice, was only a minor point at that time. In this paper, we report our findings from these projects in order to develop the competencies that public administrators should have to provide co-created advisory service while integrating available IT-resources into their advisory activities. Therefore, we have developed a research framework to illustrate our approach (cf. Figure 1).

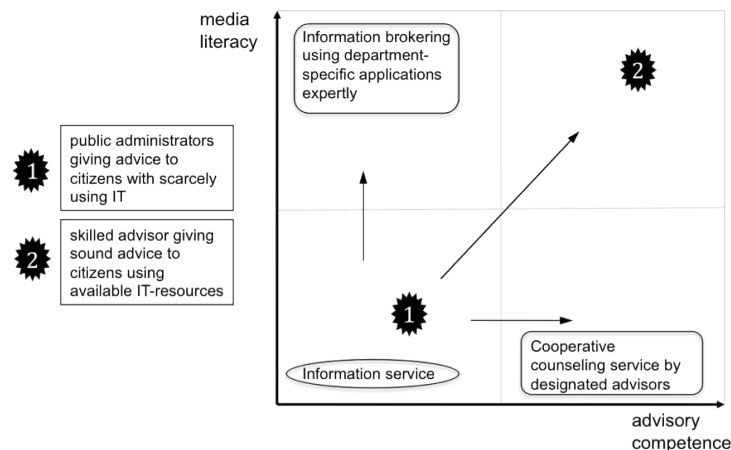




Figure 1. Research framework

An individual needs to master a set of dedicated competencies, at least to a certain extent, in order to give advice. Two major concerns lead to the two axes of the research framework depicted in Figure 1: (1) when public administrations aim to act as the “helping hand” of their customers, they obviously need to have administrators who are able to give suitable, comprehensive advice addressing the citizen’s current complex life situation, and (2) when their employees aim to act as credible advisors, they have to know when and where to find the appropriate requested information that is incorporated into a variety of single departmental IT-systems. Therefore, they have to be able to use these systems sufficiently and situation-aware. These two dimensions are summarized as advisory competence (abscissa) and media literacy (ordinate). Horizontally, the individual’s advisory competence increases towards the right. It comprises the general skills of a person acting as advisor, i.e., having the correspondent professional, methodical, social and personal skills (Erpenbeck & von Rosenstiel 2007). Vertically, the individual’s media literacy starts with low skills (and in most cases correspondingly low adoption of IT) at the bottom, increasing at the top. In general, media literacy describes an individual’s ability of understanding and being able to use different media (Baacke 1997). As we will show, current practices of citizen advisory services are located at the lower left corner (cf. ❶ in Figure 1) reflecting the current low capabilities regarding both dimensions.

To reach the target state of designated advisors (cf. ❷ in Figure 1) capable of utilizing the available media, including any accessible IT-sources, we describe what is needed to shift rightward by

developing the individual's target advisory skills and explain the extent to which a public administrator should master the available media, i.e., shifting upward in our framework. We argue that, in order to become a skilled advisor providing co-created IT-supported citizen advisory services, not only the mastery of both advisory competence and media literacy is needed, but also the knowledge of interconnecting them accurately.

To develop the individual elements of our research framework, we applied a set of research methods consisting of explorative procedures and literature reviews. To collect the data explaining the current practices within citizen advisory services (cf.  in Figure 1), we conducted two explorative studies in public offices and additionally analyzed available research material from ongoing projects conducted within our research group that aimed to develop new IT-based advisory support tools (for financial advisory (cf. Nussbaumer & Schwabe 2010) and travel counselling (cf. Novak & Schwabe 2009) to gain additional insights. For the development of the target states of advisory competence and of media literacy, we reviewed the current literature in those fields.

To assess public administrators' current skills ( in Figure 1), our data collection took place in two waves. The first phase was conducted during February/March 2009, as part of a completed project aiming to develop an IT-based system to support citizen advisory services for parents expecting their first child. We used an explorative approach by conducting 10 mystery shopping episodes and complemented them with 22 face-to-face interviews and one workshop with seven advisors and 15 citizens. A detailed description of this first wave's data collection is given in the publications related to this project (cf. Schenk & Schwabe 2010). Whereas, at that time, the interpretation of these data concentrated on identifying software requirements, we will unroll them regarding the advisor's skills and supplemented them with a second set of data collected in March, 2011. There, we focused on a university's advisory service for foreign students regarding their stay abroad. We conducted 13 interviews with two advisors and 11 foreign students to get to know the current practices of citizen advisors confronted with these requests in different life situations. In both periods, we built our questionnaire on the Needs Driven Approach (NDA, Schwabe & Krcmar 1996), especially to investigate the human-technology interaction within the counselling sessions. Due to the seemingly high impact on the advisory service quality, in the second period we added a set of questions on the advisors' competencies (built on Erpenbeck & von Rosenstiel 2007), as reflected by the advisors themselves and as perceived by the citizens.

To assess the target states within our framework, namely, for the advisory competence and for the media literacy, we reviewed the corresponding models in the current literature. Further, we conducted a thorough analysis on our group's advisory service project results, i.e., the IT tools developed, additional documentation, and expert interview with project members. With these insights, we complemented the literature-derived description on the corresponding target competencies.

3. CURRENT PRACTICES IN CITIZEN ADVISORY SERVICES

The current practice in citizen advisory services in public administrations can be summarized as "counter services" e.g., rapid processing, impersonalized, etc. Representatively, all tested counselling sessions took place within a service counter area or an open plan office that intensified the correspondent perception. The mystery shoppers noticed primarily the lack of structure within the counselling sessions. There was neither any kind of needs elicitation or situation analysis at the beginning of the sessions, nor was there control for target achievement in the end. As the advisors tended to alter unpredictably between eliciting the citizen's needs and finding appropriate solutions, they showed a clear lack of knowledge concerning fundamental advisory methods. Correspondingly, the mystery shoppers valued the received service not just as unstructured, but as insufficient (concerning the advisory result) und not customized to their situation. We refer to this as the issue of *impersonal service provision* (I1) and the issue of *intuitive adoption of insufficient methods and procedures* (I2).

Furthermore, the advisors showed narrow expert knowledge limited to their own department. Advisors provided sound qualitative advice if the requested information was under their department's responsibility, e.g., residence permit information in the registration office. Nevertheless, they could often not provide the same response quality on requests addressing other departments' information. We refer to this as the issue of *cross-departmental knowledge demands* (I3), which is of special interest when advisors are not only confronted with simple requests but with a complex life situation (a more common occurrence in practice). Following that problem, public administrators' professional competence is strongly case-based, i.e., depending on the citizen's requests the service quality changes correspondingly.

In favour of the advisors, the mystery shoppers perceived them as being socially competent, that is, responding appropriately to citizens' problems. But particularly this diversity within the advisory-related skills (cf. I1-I3) can lead to unusual situations: In one counselling session, for instance, a mystery shopper experienced how the advisor shouted through the open plan office to a fellow advisor in order to get the required information (cf. Schenk & Schwabe 2010, p. 661). Additionally, to the embarrassment of the citizen, the indirect questioning led to a significant process loss, i.e., the shared understanding was no longer given, and wrong information was transferred. More frequently, however, the advisor opportunistically shortened the solution-finding phase by answering one or two questions precisely falling in his department's responsibility, and closing the conversation subsequently, since the citizen needed to process the answers first. We refer to this as *premature conversation closure* (I4). In these cases, citizens leave the administration, being convinced that all questions have been answered, albeit they wake up at home having more questions than before. This process can result in an awkward see-saw (or a so-called "public authorities rally" where citizens have to consult multiple authorities unnecessarily Schedler & Proeller 2003), clearly decreasing the citizen's satisfaction. As this behaviour depicts, the *missing information integration* (I5) leads to one of the main obstacles for citizens to seek local authorities' advice (cf. Lenk 2007).

During the examined counselling situations, the exchange of information between the advisor and the citizen was extremely poor. The advisors collected very little data from citizens. When they had to provide information, they only used analogous media (standardized forms, leaflets and printed brochures, hand-written notes, etc.), often just referring to the hung out material in the counter area. This approach has some disadvantages: (1) these kinds of information carriers are hard to personalize (with the exception of the hand-written notes), and (2) the kind of shared (digital) material that allows the development of a shared understanding of the citizen's needs (Schrage 1990) cannot be established. Only when the searched information was provided digitally, did advisors tend to use an IT-resource to access them (e.g., by using the available desktop computer), referred to as *opportunistic media use* (I6).

In our explorative approach, we also investigated the viewpoint of the advisors as they reflected on their own skills. Most striking was the little attention that advisors gave to the existing IT resources. Advisors saw the reasons for their lack of expert knowledge and the missing personalization of their counselling services in the insufficiency of the available IT. These findings conform to insights from other studies conducted in different advisory domains, such as financial advisory (e.g., Schwabe & Nussbaumer 2009). Since advisors in these fields refer to "low trust in IT functionalities" or "not feeling confident with using IT with customer," public administration advisors note the more fundamental problem as their inexperience with IT. This lack of media literacy can be considered to be less relevant if advisors do not use or do not have to use complex IT-based support systems (as in current citizen advisory services).

Regarding the future of public administrations, including the realization of ambitious e-Government strategies leading to more sophisticated IT-tools, the advisor's skill of operating existing and new media will become a more essential part. Currently, for teaching advisors the required skills, applied concepts in public administrations follow mostly training-on-the-job approaches. In this way, new employees develop the skills required by observing experienced advisors in their counselling sessions. As the advisors mentioned the functioning of this approach, our observations did not show any significantly enhanced advisory skills. More likely, the advisors took over each other's shortcomings. What attracted the most attention was the advisors' inexperience integrating available IT into their

counselling process. To improve the advisors' *unsatisfactory interrelations of media use and advisory competence* (I7), current concepts of training should not cover only the advisors' ability to use the technical artefacts properly, but empower them to create added value for the citizens and themselves through the beneficial integration of tools into their advisory activities.

The issues occurring within the current practices of public administrators who give advice to citizens can be concentrated within two areas: 1) related to the public administrator's skills as an advisor, referred to as *advisory competence*, and 2) concerning his knowledge and capability to use available media, referred to as *media literacy* (detailed description in section 5). Several of the issues belong not only to one, but both areas. For example, the *impersonal service provision* (I1) relates to the advisor's social skills to be responsive to citizens' requests, and additionally relates to his ability to alter media-based visualisations of information, e.g., personalising forms by complementing with personal notes. In general, the individual issues have a certain focal point in one of the areas. As the focal point for the issues of *missing personalisation* (I1), *missing adoption of advisory methods* (I2) and *premature conversation closure* (I4) lies more in the area of the advisory competence, the *missing information integration* (I5) and the *opportunistic media use* (I6) relate more to the media literacy. The *cross-departmental knowledge demands* (I3) and the *insufficient interrelations of both areas of competence* (I7) can be balanced regarding their emphasis.

4. TOWARD COOPERATIVE CITIZEN ADVISORY SERVICES

The main locus of the interaction of the public authority and citizens is the service encounter. Since public administrations claim to be the citizens' "helping hand" in their specific life circumstance, there is potential to put this promise into practice during the actual encounter of a public administrator and a citizen to make this service attitude "experienceable" for citizens. The value of such an encounter is a function of the questions, demands and attitudes of the citizen (= problem space) and the way an administrator answers, recognizes needs, and adequately addresses them (= mapping to solution space). This is true for similar situations, such as service encounters in management consultancy, travel counselling, and financial advisory services. Since advisory value can inherently only be co-created, advisory encounters are prime examples of value co-created processes (Schmidt-Rauch and Nussbaumer 2011).

Usually, it is difficult to express an information need explicitly, as a citizen does not overlook the complexity of his or her life situation, and explicit needs remain sticky (Hippel 1994). The revealed issues of premature conversation closure and improper advisory methods ((I2), (I4)) signal that a process is needed to develop the citizens' implicit needs, wishes, and demands, transforming them to an explicit problem definition. In a dyadic advisory encounter, both parties additionally need to establish common ground to find the best solution to the problem, since the language and terms of the problem space (in the citizens' minds) and the solution space (in the administrators' minds) may not be the same, nor may these spaces overlap. By reaching this shared understanding, the advisory service becomes inherently more personalised (I1). Furthermore, both participants can have diverging goals about the advisory result, e.g., one group of advisors in our studies had the mindset of "teaching them autonomy," which restrained them from giving comprehensive advice - a clear objective of the citizen. Citizens and advisors have to rely on their shared dialog to build this common ground.

After a problem definition is clear to the conversation counterparts, the solution space is open for exploration. As this space contains all possible solutions for problems occurring within a citizen's life circumstance, the solution space is presumably large. In the case of a pregnant woman's requests, for example, there have to be solutions regarding financial benefits, information on hospitals and midwives, accommodation options, etc. This initiates the cross-departmental demands (I3) that the advisor should answer, and, on the other hand, it creates difficulties for the citizen - to use our description: *burden-of-choice* (Schwartz, 2005). Therefore, a skilled advisor has to guide the citizen in the exploration of the solution space and avoid information overload by filtering and explaining information comprehensively. In short, the advisor should emphasize the true value of the service: increasing the citizen's apprehension of his actual situation and enabling him to act regarding the interactions with the public authorities.

Following Schmidt-Rauch and Nussbaumer (2011), we can apply four solution perspectives to the vision of a value co-created, cooperative citizen advisory. (1) Service encounter as *learning process* addresses especially the stickiness of information needs and the dialog problem. (2) Service encounter as design process addresses especially the explorative solution-finding within the unlimited solution space. (3) Service encounter as *collaboration* diminishes the encounter-related problem resulting from potential diverging-goals conflicts. (4) Service encounter as *experience* is the consequent, traceable, and finally experienceable transmission of the helping service to the citizen within the situation and the channelization of opportunities to increase service satisfaction. These perspectives are described in greater detail below.

Citizen advisory as learning process: an empathic advisor (addressing his social skills) is able to learn the language and expression norms of the help-seeking citizen in order to define the problem - in other words, the parameters of the citizen's current situation. The citizen himself needs to learn about these parameters since they do not need to be visible and clear. The advisor is asked to be a coach in this learning process, emphasizing his competency of being a mentor.

Citizen advisory as design process: the shared exploration of possible solutions within the citizen's life circumstance establishes an increasing understanding of the situation by the advisor and the citizen. The consuler needs to have a clear understanding of possible solution formations from which he is able to choose the adequate one. The advisor is asked to be the enabler in that situation: a moderator of decision-making, including advice-giving, such as a mentor who would give advice to his student. Therefore, the advisor may not need to know everything from every governmental department, but he should have the cross-departmental knowledge needed to guide through the myriads of information.

Citizen advisory as collaboration: for establishing an equalized dialog between advisor and citizen, the advisor is asked to listen carefully and accept the citizen as equalized counterpart. Being a neutral moderator of the solution design process, the advisor should lead dialog logging within shared material and thereby supporting the learning process as well as the design process.

Citizen advisory as experience: effort is needed to make the value of a service encounter visible, since services compared to products are intangible, and the quality of advisory results can only be estimated with difficulty. The encounter itself therefore needs an own quality. Deferring crucial questions to any time in the future or sending the citizen to (many) other departments, possibly also located at different towns or urban quarters, appears to have a negative impact on the advisory experience. Coming to a closure by providing entry points for whole life circumstances would support a positive attitude of citizens. This calls for an extensive cross-departmental knowledge combined with an easy-to-understand language as the main competency challenge for advisors.

5. CITIZEN ADVISORY MADE POSSIBLE: MEDIA LITERACY

In their study on governmental citizen service quality in 2007, Accenture (2007) proposed that the future of public administrations contained the fulfilment of their promises of citizen-centric government services. Accordingly, administrations are now beginning to building up an integrated, enabling back-office². Thus, they intend to allow their front-office administrators to provide better service to their citizens, as Ken Cochrane, CEO Government of Canada states: "*Improving and modernizing internal services is essential to delivering improved citizen services*" (Accenture 2007). It is essential for the public administrator to have the required skills to properly use all available media channels. Accordingly, the description on value co-created citizen advisory (cf. previous section) lacks one important component: the media literacy of the advisors.

In short, media literacy describes the individual's ability to access, analyze, evaluate, and create media according to their own objectives and needs. Baacke, whose definition many authors use (e.g., Gapski 2001, Groeben 2002), operationalized media literacy in 1997 by explaining it as follows: An individual should:

² This effort reflects certain eGovernment project names, e.g., in Singapore the project is called "iGov2010" where "i" stands for "integration", i.e. integrate data sources distributed over their different departments and improving internal services.

1. know and be able to use media,
2. be able to orientate himself within one medium and between different media,
3. be able to participate in media-based communication,
4. keep a critical distance to media, and
5. be creative in the world of media.

To show the practical meaning of this description of media literacy, we apply it to citizen advisory services and the salient issues (cf. section 3).

1./2. The advisors' main task is to elicit the citizen's needs and match them with adequate solutions, i.e., present the correspondent information. Therefore, as an essential prerequisite, they have to know the existing information sources and be able to use the media required to access them. They have to be well versed in the technical manipulation of corresponding devices so it does not hamper them performing their role as advisors. Accordingly, the advisor needs the methodical skills to know which medium is to be used for which purpose. Moreover, when the consuler demands specific information (e.g., the marital status), the advisor has to have the overview of available information sources and know what is needed to obtain specific information, e.g., the population registry can only be accessed through his workspace's desktop computer. Without the advisor's knowledge of media purposes, the quality of the provided service suffers when he tries different media channels to find the information required.

3. As the issue of missing information integration (I5) depicts, the advisors has to be able to integrate available media into the verbal dialog with the advice-seeking citizen. For lightweight information, he can pass standardized information, e.g., a leaflet, and use it as basis for further explanations and discussions. When accessing more specialized information sources, an advisor foremost needs to translate the information into the consuler's vocabulary of concepts before passing them over. Consequently, the advisor has to know a concept for each medium in order to integrate it as a communicational element into the advisory dialog. For example, in the preliminary needs elicitation, the proper adoption of media to visualise shared material helps to bring together problem and solution space, as well as to create a common understanding of the citizen's problems. Hence, media should not only be adopted opportunistically (I6), but has to be integrated in a well-proven advisory procedure (I7).

4. While the advisor operates as facilitator between a used medium and the consuler, he has to assess the trustworthiness of information obtained through this medium. The advisor has to keep a critical distance to the correspondent medium in order to enlighten the consuler (as layperson) which sources he can trust and how they have to be understood. As, for example, in Internet-based media (World Wide Web pages, blogs, wikis, etc.), advisors should use all available information sources, but with access to the correspondent critical annotations regarding their trustworthiness.

5. Finally, advisors should be creative within the media available to them. They should arrange and manipulate them, as it is useful to perform sound advice. As a good example, one group of advisors in our study set up a shared bookmark list of the most common or important websites. As a consequence, they are integrating Internet-based media more systematically, resolving (I5), and reaching information more easily. In general, today's IT-based media are rarely created for advisory purposes, e.g. complex, technical interfaces. Accordingly, advisors have to alter instantiations of these media, in order to heighten their value for them and the consuler.

To bring advisors' media literacy to an acceptable level, the individual parts have to be addressed and promoted. In addition to the development of the advisor's expert knowledge and the technical manipulation of media, the prerequisites have to be laid for a beneficial integration of the media into the advisory process (I7). Persons responsible for the introduction of new IT tools for public administration advisors have to provide a correspondent concept of schooling to develop the advisors' media literacy.

6. LINKING SKILLS AND DEVELOPING ADVISORY LITERACY

IT-based tools have a lot of potential to support public administration's advisors in their daily work (consistent with emerging e-Government initiatives). On the one hand, providing the correspondent information and functionalities to alter their representations gives advisors access to a cross-departmental knowledge base (I3), providing the prerequisites to integrate this information into the conversation beneficially ((I1), (I5)). On the other hand, they can support the advisors in applying proper counselling methods and procedures (I4), e.g., purport an overall stage model for the advisory process or force certain activities within one of these stages, for example, the development of a shared understanding during needs elicitation. To access the full potential of these supportive IT-systems, the advisors compellingly need the correspondent media literacy and the appropriate method of learning the new IT-enabled work practices.

Current practices in citizen advisory services show that advisors scarcely adopt available IT-resources during their face-to-face citizen encounters. We argue that, in order to become credible advisors in today's public administrations, they have to establish their competencies within two areas: first, in their skills to provide sound advisory service, and second, in their media literacy. But most importantly, they have to develop their capabilities to interrelate the two areas and suitably integrate available IT-sources into their advisory sessions. We call this aggregation of competencies *advisory literacy*. This specifically means to link (1) empathy (addressing their social and personal skills), (2) establishment of common understanding (e.g., Schrage 1990), (3) situational role understanding (mentor, moderator, partner, guide), (4) methodical and procedural necessities, (5) appropriateness of situational integration of media, (6) the own professional knowledge (regarding the advisor's department), and (7) cross-departmental media literacy. Citizen advisors having sufficient advisory literacy will then be enabled to provide sound advice.

Public administrators need to develop their advisory literacy to succeed in their advisory tasks. Therefore, they need an elaborated concept of training so that they learn the new IT-enabled work practices and perform a co-created citizen advisory service, i.e., get from ❶ to ❷ in Figure 1. Based on the description of this variety of skills that citizen advisors should have, we want to suggest which fundamentals a correspondent vocational training should comprise. As illustrated in Figure 2, there are different approaches to develop the advisors' specific skills.

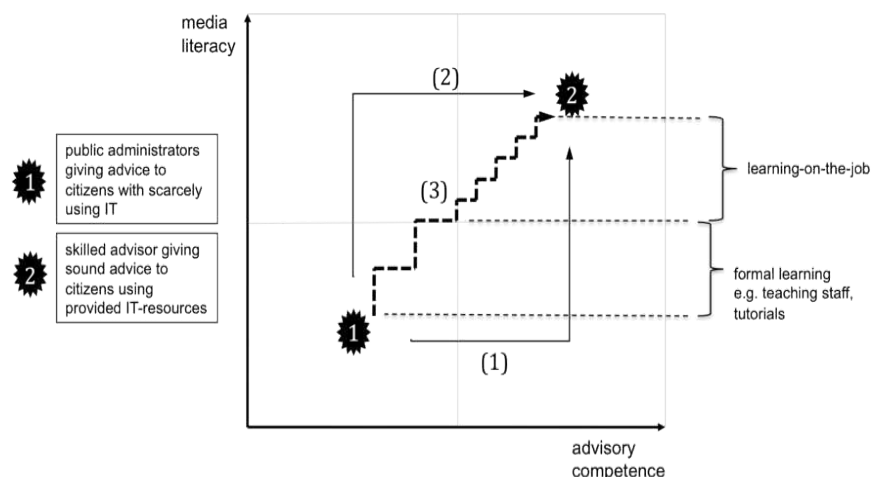


Figure 2: The order, in which diverse concepts of training develop the individual's advisory competence and media literacy

A first possible concept, labelled (1) in Figure 2, intends to develop the administrators' skills as advisors first and acquaint them afterwards with the IT-resources required. As a result, after the first half of the entire learning cycle, there are distinguished advisors not able to access specific parts of the governmental information sources. Accordingly, the public administrators would not be able to give advice to citizens until they have learnt to operate the available media. This often takes additional time

due to the formal teaching methods required, e.g., an appointed instructor explains tools and functions, answers questions, etc. Accordingly, the organization would have to spend a lot of time (and money) for the vocational education of their advisors.

On the other side of the spectrum, a second approach for the advisors qualification (labelled (2) in Figure 2) is, where the administrators would learn to operate the IT-resources they need first. But these acquired skills would not persist, especially when the future advisors do not understand the learning target of providing sound advice. Geldermann et al. (2006) point out that such advanced learning generates inactive knowledge, which often cannot be applied within the vocational context in the end. In contrast to the first approach, it will be easier in the second stage of this concept to enrich the currently learnt advisory competencies with the correspondent media. Although this second approach appears to perform better than the first, new employees are not able to give advice to citizens until they have finished both parts of the educational training, which means prolonging the time until they are able to work.

We argue that the adequate concept of training for the vocational education of advisors providing sound IT-supported citizen advisory services follows a middle course (depicted as the step function (3) in Figure 2): As their advisory competence increases, they have to develop the appropriate skills regarding their media literacy. In addition, we distinguish a first phase of the advisors' qualification from a second one, where they follow a learning-on-the-job concept. The rationales lie in the shortening of time-consuming formal learning methods needed and the time until an advisor is fit for work. In the following paragraphs, we outline a correspondent concept of training with these two stages. This concept extends the learning-on-the-job perspective of Schmidt-Rauch and Geiger (2010) by a lesson-based qualification phase. Schmidt-Rauch and Geiger (ibid.) implement a promising concept for training-on-the-job in the related area of travel counselling using an innovative counselling tool.

First and foremost, the prospective citizen advisors have to develop basic skills regarding their media literacy, i.e., at least points 1 and 2 in section 5. We assume that they further have some general orientation about the organization's agenda regarding citizen advisory services, as they learn it in their employment. Having this groundwork, the advisors should start (or continue) to develop their skills using formal learning methods, e.g., by appointed teaching staff, tutorials, etc. In this first stage, it is the objective to empower the advisors to perform their assigned task and thereby be able to answer the average citizen's requests. They learn the advisory methods and procedures required, and, simultaneously, they enhance their competence in operating the available IT-resources to the extent sufficient to support their advisory activities. As in this stage, we restrict ourselves to the fundamentals where interrelations between advisory competence and media literacy are not as crucial, and therefore the learning sessions can be arranged quite independently.

Our concept of training targets shortening this first stage to minimize the time-consuming (and expensive) formal learning. Instead, we intend to support the advisors with a learning-on-the-job concept (also referred to as training-on-the-job, Walter 2001), where they incorporate the used IT-resources into their further efforts to enhance their advisory services. Within this on-the-job concept of training, the advisors can individually deepen their skills in a self-determined learning environment.

On-the-job learning, i.e., self-directed learning along the work, is often initialized by the employees themselves (Frieling & Sonntag 1999). Therefore, informal learning methods are suitable, but according to the complexity of the matter, formal methods can be employed, e.g., a designated expert operates as mentor to assist in problematic situations. In any case, the correspondent concept always needs to be oriented to the particular advisors' preferences. Therefore, for the second stage of our concept of training, we do not describe a detailed concept, but highlight the basic principles it should have. We follow Schmidt-Rauch and Geiger (2010) and state the following principles for our learning-on-the-job concept:

- *The learning has to be explorative:* It is essential to our concept of learning to understand the interplay of advisory methods and the respective IT-resources. The advisors should gain experience by actively solving problem, e.g., "Exercise: prepare and dispense a public parking lot card for urban district X." In their explorative search for solutions, they face dead-ends and

throwbacks and thereby experience new perceptions on known circumstances by their repeated executions. Accordingly, the advisors should be empowered to advance the learnt advisory methods by adapting them to their work practices and linking them to the separate governmental department information.

- *The learning has to be self-directed:* As the advisors have the possibility to organise the learning in their domain of knowledge on their own, time-consuming learning ahead, as happens in the less suitable approaches ((1), (2) in Figure 2), can be avoided. In this way, they are able to personalise their learning to their existing knowledge and skills.
- *The learning has to be cooperative:* The citizen advisors should become an interconnected study group. By sharing their knowledge and experiences within a heterogeneous group of advisors, they can learn transferable skills. As the citizens' cross departmental knowledge demands (I3) depict, the enhancement of these skills is particularly important for citizen advisors.
- *The learning has to be goal-oriented:* Citizen advisors' core competence should be their capability to tailor their knowledge and experience of governmental concerns to the citizen's needs. Therefore, the on-the-job-training's objective has to be the development or extension of their advisory competence while updating the correspondent media literacy.

An elaborated on-the-job training that follows these basic principles can be used to empower citizen advisors in modern public administrations to get from simple information brokering to the provision of a co-created, IT-supported citizen advisory service (● in Figure 2). Accordingly, supportive IT should address these principles and therewith support the advisors' skills development. First evaluations of a correspondent concept of training accompanied by an adequate IT tool conducted in the domain of travel counselling are promising relative to the advisors' learning satisfaction and the concept's adaptability into current work practices (Schmidt-Rauch & Geiger 2010).

7. CONCLUSION AND FUTURE WORK

Based on the current practices in citizen advisory services, we have highlighted the shortcomings of public administrators and derived two areas of capabilities they compellingly require in modern public administrations: advisory competence and media literacy. From our subsequent reviews on the target states of these areas of competence, we have developed the skills which public administrations' advisors should have in order to provide sound citizen advisory service, utilizing the available IT-sources beneficially. We thus emphasise the importance for advisors to be aware of the interrelations between their advisory skills and their media literacy, named advisory literacy, so that they can apply the collected knowledge to their provision of a co-created citizen advisory service.

Grounded on the identified citizen advisors' competencies, we argue that public administrators need particular training to learn the IT-enabled work practices within modern administrations, and propose a didactical concept of training for their vocational education to provide co-created (IT-supported) citizen advisory services. Furthermore, we argue that the learning process has to be divided into two stages: (1) qualification and (2) learning-on-the-job. In doing so, the time until the advisors are able to work is shortened, and they are encouraged to continue their learning during their work. The elaborated set of principles for a learning-on-the-job concept supporting the development of public advisors' competencies contributes to the requirements development regarding the design of advisory information systems for modern public administrations.

To verify the observed problems concerning the advisors' conventional work practices and to evaluate the proposed concept of training within the domain of co-located citizen counselling, we propose to follow a user-centred design process (ISO 1999) and start an iterative cycle: A (new) design solution for a citizen advisory support system should be developed, adapted to the concurrently elaborated concept of training, and tested in a real-world setting. This would reveal an even deeper understanding of current learning and personal development practices, and provide empirical insights regarding the

design of adequate IT-artefacts supporting citizen advisory and advisors' development of competencies.

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